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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,509	06/30/2003	Geun Su Lee	30205/39440	2596
4743	7590	06/29/2004	EXAMINER	
MARSHALL, GERSTEIN & BORUN LLP 6300 SEARS TOWER 233 S. WACKER DRIVE CHICAGO, IL 60606			WALKE, AMANDA C	
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/609,509	<b>Applicant(s)</b> LEE, GEUN SU	
	<b>Examiner</b> Amanda C Walke	<b>Art Unit</b> 1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10, 12-17 and 19 is/are allowed.
- 6) ☒ Claim(s) 11 and 18 is/are rejected.
- 7) ☒ Claim(s) 1, 3 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: Throughout the specification the TIMD compound is written as “tetraisoprophyl methylene diphosphonate” when it appears that the compound should actually be “tetraisopropyl methylene diphosphonate”.

Appropriate correction is required.

### *Claim Objections*

2. Claims 1, 3, and 12 are objected to because of the following informalities: The TIMD compound is written as “tetraisoprophyl methylene diphosphonate” when it appears that the compound should actually be “tetraisopropyl methylene diphosphonate”. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 11 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Dulog et al (3,882,203), Clecak et al (4,601,969), or Graham (4,195,997).

Dulog et al disclose hydrocarbon-peroxy hydrocarbon phosphonate compounds useful as polymerization initiators in polymerizable resin compositions, thus anticipating the instant

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claims 11 and 18 which simply require the presence of a P=O bond- containing hydrocarbon compound in a resin.

Cleacak et al disclose a high contrast UV sensitive photoresist comprising an alpha phosphoryl substituted diazo compound as a sensitizer. The compound comprises a hydrocarbon chain and a P=O bond, thus the reference anticipates the instant claims 11 and 18.

Graham disclose a photopolymerizable composition comprising a photoinitiator, and a flame retardant that comprises both a hydrocarbon chain and a P=O bond. Therefore, the teachings of

the reference anticipate the instant claims 11 and 18. *Allowable Subject Matter*

5. The following is a statement of reasons for the indication of allowable subject matter: The instant claims 1-10, 12-17, and 19 are indicated as containing allowable subject matter. The prior art of record fails to teach or suggest to one of ordinary skill in the art to prepare a TIMD compound, a photoresist composition comprising the compound, or a process for preparing a photoresist pattern comprising a resist composition containing a TIMD compound.

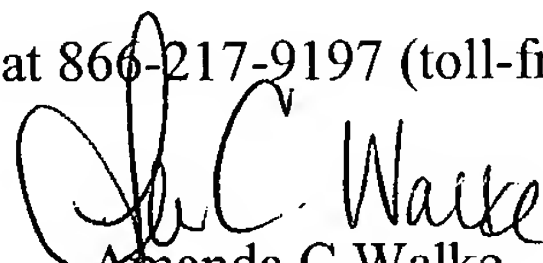
### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hatekeyama et al (6,579,658), Minagawa et al (4,224,203), Alexandratos (5,442,085 and 5,256,808), Trochimcznk et al (5,712,347), Grinter et al (6,048,995), Martl et al (5,684,116), Lauke et al (4,935,332), Siddall et al (3,694,526), and Kosolapoff (2,594,455) are cited for their teachings of similar compounds and materials.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C Walke whose telephone number is 571-272-1337. The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Amanda C Walke  
Examiner  
Art Unit 1752

ACW  
June 23, 2004